Navigation Sensor System Interface
NAVSSI AN/SSN-6(V)
BRIEF FOR FLEET N096 MEETING

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Outline

- **Background**
- **Specific Questions**
- **Summary**

BACKGROUND
Navigation Sensor System Interface

NAVSSI performs two main functions:

- **Collection, processing, integration and distribution of navigation data to weapon systems, combat support systems, C4ISR systems, and other information systems users**
  - **Embedded GPS VME receiver card (GVRC) replaces AN/WRN-6 as the GPS receiver in NAVSSI block 3**

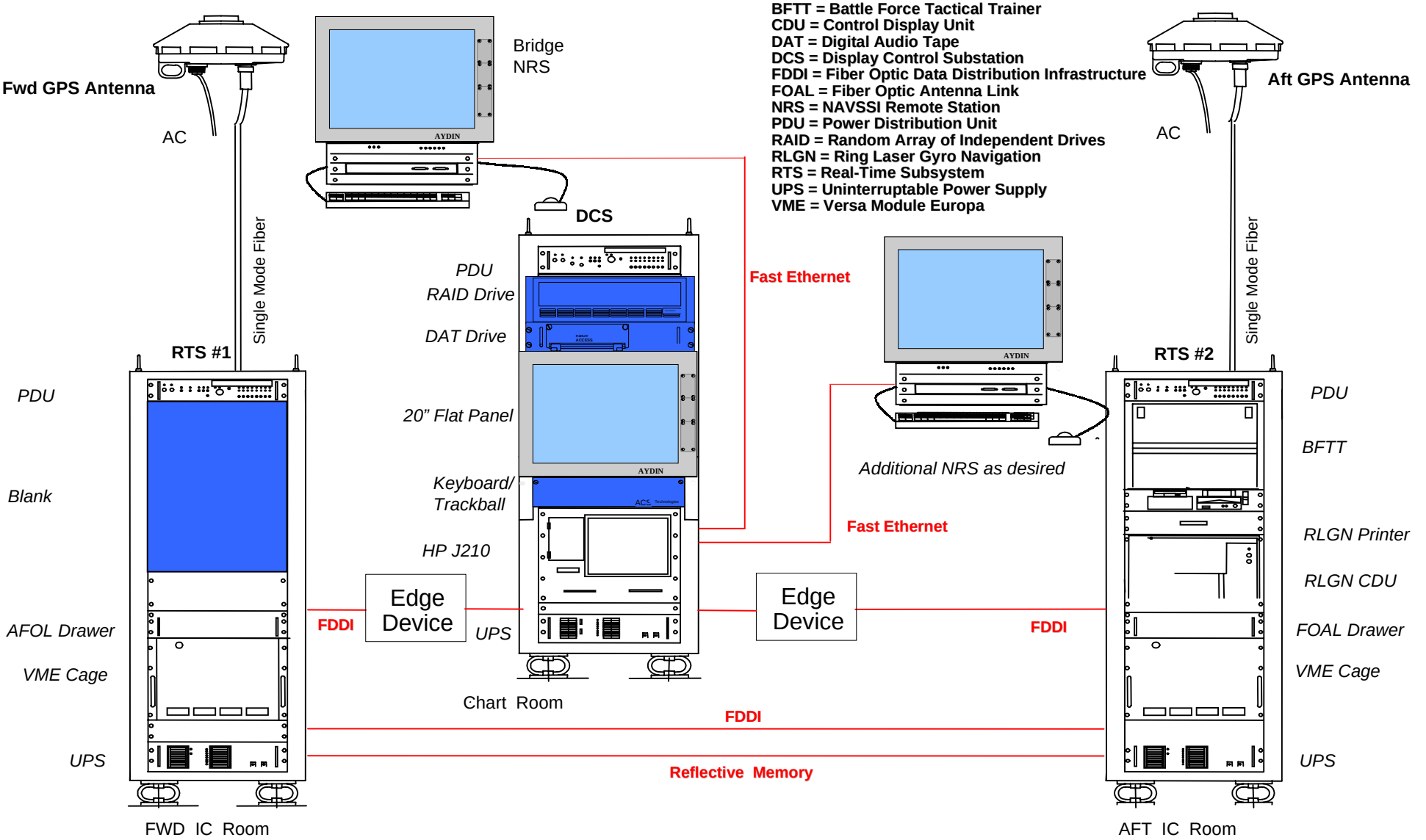
- **Electronic navigation/charting/ voyage management**
  - **USCG-developed Command Display & Control (COMDAC) software**
  - **Embedded STELLA (System To Estimate Latitude & Longitude Astronomically) celestial navigation software segment**

The State of NAVSSI

72 OPN, 21 SCN and 37 Upgrade Installations Complete

- **NAVSSI Block 2**
  - **All Block 0/1 Upgraded to Block 2 Configuration**
- **NAVSSI Block 3**
  - **Fielded in different "builds"**
    - **Block 3 Build 2**
      - **Introduced Dual Redundant GPS VME Receiver Card (GVRC)**
      - **Existing Installs Will Be Upgraded to Build 4 Configuration**
    - **Block 3 Build 4**
      - **Integrates Mature USCG Command Display And Control (COMDAC) Electronic Charting Segment And Adds New Interfaces**
- **NAVSSI Block 4 (Future)**
  - **Several different configurations**
    - **Full RTS suite(s) or "NAVSSI Lite"**
    - **Embedded DCS processors or IT-21 Block 1 Enterprise Servers**
    - **VMS build for CVN 69, 70, 76**

NAVSSI Hardware



09/18/2001

BACKGROUND
NAVSSI Block 3 Build 4

- NAVSSI Block 3 Build 4 was designed before the ECDIS-N requirements were known.
  - Does not provide an electronic back-up system.
  - COMDAC software (HP) requires upgrade for ECDIS-N.
- NAVSSI Block 3 Build 4 can be made ECDIS-N compliant via two routes:
  - Option A
    - Up grade current software and use paper charts as back-ups.
  - Option B
    - Upgrade NAVSSI remote stations with new software and hardware.
- SPAWAR and N6 are evaluating the cost and schedule impacts to each option.
- For the rest of this brief it is assumed that Option B is the approach taken.

Specific Questions

System Specific Issues

System Development

What is the schedule for initial delivery of the ECDIS-N certifiable equipment and computer program?

NAVSSI B3B4 upgrade will complete design review in Feb 2002.

Testing will begin 2QFY02

Installation 2QFY02

ECDIS-N cert 3QFY02

Compliance with OPNAVINST 9420.2

What is schedule for DT/OT?

DT/OT in Mar/Apr '02.

Have all requirements for certification of readiness to commence operational evaluation (OPEVAL) and/or follow-on operational test and evaluation (FOT&E) been met?

Will leverage NAVSSI Lite TEMP, DT, OTRR are still required prior to OPEVAL

Specific Questions

Are there any requirements that the candidate system will not meet by Target Configuration Date? If so, what is the schedule for corrective action?

Yes NAVSSI B3B4 will require a TCD waiver

Are there any requirements that need amplification or clarification?

- **Shock testing for AEGIS platforms**
- **NAVCERT: What does this entail? Waiting for revised NAVSEAINST**
- **VDU spec not finalized ---this is a NIIMA action item.**
- **Geosym 4, which continues to evolve and still has not been approved/finalized**
- **DTDS: NIMA found problems with their DNC Test Data Set during the Direct Read Testing at C2CEN. Fixes still in progress. What is the re-look plan for systems that previously received a NIMA cert for Direct Read on earlier, incomplete prototype Test Data?**
- **Many 9420.2 requirements in section 3 have no corresponding sec 4 test methods. Working with OPTEVFOR**
- **DNCs: none have been certified for navigational use.**

Specific Questions

Security Issues

Are there any classification problems that need to be addressed either procedurally or in the equipment design? (i.e. Are there any issues associated with storing and/or displaying classified chart information on the identified system?)

No, NAVSSI is capable of displaying classified charts

System Test

What is status of DNC direct read certification?

C2CEN is working directly with NIMA. An initial look was conducted in June '01 leading to required action by both C2CEN (some fixes to COMDAC) and NIMA (some fixes required to the Test Data Set). N096 and OPTEVFOR will be invited to observe follow-up testing this Fall. These tests are scheduled as follows:

Oct is the next scheduled date (w/o VDU) and Nov or Dec for VDU if VDU spec firm.

Specific Questions

Has a schedule for validation of system specific procedures for NAVCERT with candidate ECDIS-N been established with SPAWARSYSCEN Charleston (i.e. NAVSSI Block 3 Build 4, NAVSSI Lite, and VMS)? If not, what is the proposed schedule for this validation?

No NAVCERT contact has been established. The revised NAVSEA instruction has not been sent out for review.

CVBG Specific Issues

CVBG Equipment Procurement

Does equipment need to be procured to support shore-based training?

Yes, same course as NAVSSI Lite

Specific Questions

If it hasn't been procured, what is the procurement schedule (for each installation)?

After completion of design review, most likely Sept time frame

Does equipment need to be procured to meet the CVBG requirements?

Yes, NAVSSI B3B4 upgrade will require additional funding. Only the following ships are affected:

- **USS G. Washington**
- **USS Mahan**
- **USS Paul Hamilton**
- **USS Milius**

Specific Questions

Are there any known funding or procurement issues that will prevent meeting of the schedule?

Yes, funding is required

<u>CVBG D-30 Process (Compliance with CLF CPF INST 4720.3A)</u>

Have required entries been made into the electronic CCB?

No, but may not be required (field change)

Will all final installations and/or computer program deliveries be completed by the identified Target Configuration Date(s) (TCD)?

No, this will be a TCD bust

Specific Questions

Installation

Are there any prerequisite installations/configurations required?

No, will be using all the same interfaces as NAVSSI B3B4

What equipment changes are required?

Install new NAVSSI remote stations and rewire RTS feeds

Specific Questions

Have all required organizations approved installation of equipment and computer programs?

No, However, this may only require Program Manager's decision.

If not, what is schedule for obtaining approval?

N/A, if not ECCB entry

How much time is required to complete each installation?

Average of 10 days

Specific Questions

Which required organizations have agreed to the proposed schedule(s)?

None, this concept requires still requires funding and approval

Who (i.e. shipyard, Alteration Installation Team, etc.) will perform the installations?

AIT

Specific Questions

What specific documentation has been prepared to support the installations?

None, however very little required if only a field change

Have any issues been identified that will delay and/or prevent installation?

N6 and SPAWAR approval are the first identified issues

Summary

Summary

- **NAVSSI Block 3 Build 4 will require modifications to meet ECDIS-N**
- **SPAWAR in the concept design phase as to how and how much it will cost**

BACK UP